



THOMAS G. NEWMAN,
EDITOR.

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The Rev. Stephen Roese has had another light attack of La Grippe. He is a correspondent of four bee-periodicals in Germany, as well as several in America. He has our wa pathy in his affliction.

After Adding 6 more pages of reading matter to this number of the BEE JOURNAL, still there are many interesting articles crowded out, which were intended for this week's issue. Is it worth *two cents* to the reader? That is all it costs, at \$1.00 a year!

This is What our friend, James Heddon, the President of the Union, wrote, when sending in his dues and vote for officers for the coming year: "Allow me to thank you for the energy and good work devoted to the Union during the past year."

C. H. Dibbern, when sending his dues to the Union, writes: "There is nothing I pay more cheerfully than my dues to the National Bee-Keepers' Union." This is the sentiment generally expressed by all its members.

Stock of Honey on the Market.—

Chicago is at present well supplied with honey, but it is not white clover. The extracted-honey is nearly all from California, as well as the comb. Desiring to know how the stocks were in New York and Boston, we wrote to the honey-dealers there, and as their replies will interest our readers, we give them here:

The quantity of comb-honey on our market is very light, probably the lightest for years. We do not think that there are 300 crates in the entire market. The demand is not very strong, but it is moving off fairly, in a jobbing way.

BLAKE & RIPLEY.

BOSTON, Jan. 5, 1891.

The stock of comb-honey in our market consists of from 500 to 600 crates, principally in one-pound sections, unglassed. There is no fancy, desirable stock on our market. The demand has almost ceased, especially for this class of goods. Our market is well stocked with extracted honey, especially with California honey, of which there are about 5 to 6 carloads. The stock of basswood, white clover and buckwheat extracted-honey is light, and the prices are firm.

HILDRETH BROS & SEGELKEN.

NEW YORK, Jan. 5, 1891.

A Pure-Food Bill is now before Congress. In the interest of health and the general welfare, each one of our readers should send a letter to the member of Congress from that District, urging him to call up the Bill for immediate consideration, that it may be acted upon at once. This Bill relates to fraudulent imitations of food and drugs, and this includes honey. All bee-keepers are therefore interested in its passage. At the Detroit Convention this subject came up, and resolutions were passed, as published on page 88 of our last issue.

We Have been adding over 100 new subscribers per week since the new year. That is genuine appreciation!

The Investment of a dollar in the BEE JOURNAL, gives you 52 dividends in a year. Can any one desire a better investment? or will they ask for richer returns?

Illinois State Association.—Concerning the necessity of forming a State Bee-Keepers' Association, for Illinois, we have the following from Dr. C. C. Miller and Mr. C. P. Dadant:

FRIEND NEWMAN—There is to be a Fair in Chicago. A big Fair. You know about the expectation, as to a bee-keepers' display there. Illinois ought not to be behind any State, in its share of the exhibit. It is one of the leading States as a honey-producer. No State can more conveniently reach the Fair. To make a good display, money is needed. It would be proper, and is entirely possible, to receive something for this purpose from the State treasury. The Illinois Horticultural Society has received aid from the State, when there was no special reason, as at present, for receiving such aid. It is entirely proper that it should, and we think it has received it regularly for a good many years. Is there any reason why bee-keeping should not be fostered by the State, as well as fruit-growing?

But the State will not make an appropriation to us, or to you, as individuals. Neither will it appropriate to the bee-keepers of Illinois, except in some regularly organized form, which shall include the whole State.

Without more words, we should organize, and that too immediately, a State society.

Aside from the big Fair, there are other good reasons for the existence of such a society, but I do not suppose it is necessary to multiply words.

In the little consultation we have had about the matter, Peoria, Springfield and Chicago have been spoken of as good points for a meeting.

Now, Bro. Newman, please call for the views of others, and give your own. Or, how much risk would there be in calling a meeting at an early day? Would not enough respond, to form a good society?

Last, but not least, it may be well to mention that we are not without a man in the Legislature who will have a warm interest for us—one of our own number—J. M. Hambaugh, of Spring, Ill.

C. C. MILLER.

C. P. DADANT.

In addition to what I have said, in connection with friend Dadant, let me say a little more. There has been no meeting of the "Northwestern" this year. The poor crop and the Keokuk meeting, made it seem advisable to have none. Still, I think that if one had been called there would have been a fair

attendance. We have always had meetings that would compare favorably with any of the State meetings. If a State meeting were called at Chicago, is there any doubt that those who would have attended the Northwestern would be present, with others added? Is there any time in the very near future when we can get reduced rates? Prompt action must be taken, at least prompt enough to give plenty of time to bring our matters to the attention of the Legislature, some time before adjournment. Friend Dadant is the one who deserves credit for starting the movement. Indiana, and other States have sent bee-keepers to Chicago, heretofore.

Would they not do so again? Even if they had no interest in the display of Illinois, they would help to make a good meeting, and we always enjoy their presence. A. I. Root wanted some one to take him by the collar, if he became careless about attending Bee-Keepers' Conventions. If he does not come (if we have a meeting) some one should pull the collar clean off of him.

C. C. MILLER.

Marengo, Ills., Jan. 17, 1891.

We heartily agree with our friends Miller and Dadant, as to the *necessity* for a State organization AT ONCE. And to that end, we suggest that a meeting be called by the officers of the Northwestern as soon as possible, and let that body discuss the situation, form a State Association, and incorporate it the very next day. Then it will be ready to apply to the Legislature for a "grant," as other societies have done, and be ready to make arrangements with the Columbian World's Fair Directors, for a suitable exhibit, which shall be a credit alike to the Fair and the great State of Illinois. These suggestions are already sent to friends Miller and Dadant, and we may be able to present something definite in next week's JOURNAL.

Miss Alice, daughter of Mr. and Mrs. T. F. Bingham, was married to Mr. Joseph P. Grimes, on Jan. 8, 1891, at Abronia, Mich. The young couple will reside at Holland, Mich., to which place they return from their wedding tour on Feb. 4. The BEE JOURNAL wishes them happiness and prosperity.

The Honey Bee : Its Natural History, Anatomy, and Physiology. By T. W. Cowan, Editor of the *British Bee Journal*, illustrated with 72 figures and 136 illustrations.

This is the title of the latest book on Bees. It is not a manual for directing the methods of manipulation in an apiary, but a book of 200 pages on the "natural history, anatomy and physiology" of the honey bee. It is printed in the highest style of the art, and the illustrations are marvelously fine. The subject matter is as interesting as a novel and withal highly instructive. It is nicely bound in cloth, and should have a large sale. We have ordered a stock of these books, and can supply orders about the end of February. Price, postpaid, 75 cents.

This book has already created a considerable amount of interest and stir in scientific circles, as there is no other book that treats of the natural history of bees in the same manner. It is already being translated into French and German and will probably be translated into several other languages. The illustrations are new and original, and it has taken a long time to prepare the drawings for them. The result, however, quite repays for the labor.

Tin Honey Cans.—A correspondent in Nevada, Mo., on Jan. 15, 1891, wrote us as follows :

I wish you would try to get an expression from the large dealers in honey, and the commission men, stating the sizes of tin cans in which extracted-honey sells the best. Also, as to the favor bestowed on kegs. A discussion on this subject by those who handle large lots of honey would be of interest to many readers of the BEE JOURNAL.

We will gladly publish anything that may be furnished on this subject, and invite the wholesale and retail dealers to give us their views and experiences with the different packages for extracted-honey, stating also their preferences and those of their customers.

Trade-Mark for Honey.—The following letter on the above subject is of interest to all :

Dr. Mason, Byron Walker and myself, were appointed a committee, at the Michigan State Bee-Keepers' Convention, held in Detroit, on Jan. 1 and 2, to try and arrange with the National Bee-Keepers' Union, to have it issue a "Trade-Mark" to its members, to use on honey labels. Just how it can be done, does not occur to me, but I think you, as manager of the Union, can devise some plan to bring it about. If such an arrangement can be made, it will add wonderfully to the ranks of the Union, as well as being a great benefit to the bee-keepers generally. M. H. HUNT.
Bell Branch, Mich., Jan. 12, 1891.

We invite all the members of the National Bee-Keepers' Union, and others who are interested, to discuss the matter thoroughly in our columns, in order that we may arrive at some beneficial conclusion, as speedily as possible.

The first number of the *American Bee-Keeper* is on our desk. It contains 16 pages and a cover, and is nicely printed. The name is unfortunate—it being so much like ours, that there is some danger of its being mixed up with it, especially when its editor calls it a "bee-journal." Another thing is to be regretted: It has inserted advertisements not only without authority from the advertisers, but against their protest, and then offers a "discount on the first order for goods," when mentioning that "journal." When this "special discount" is repudiated, as we are informed that it will be by the advertisers, there will be trouble. It is unbusinesslike in more ways than one, and should be promptly changed. We mention this by *special request* of their advertisers, who are greatly annoyed over the matter.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

In the Apiculturist for January, Brother Alley remarks thus about the **AMERICAN BEE JOURNAL**:

Brother Root says every bee-keeper should subscribe for the **AMERICAN BEE JOURNAL**. That is just what we have been saying for a good many years. Somehow we manage to keep ahead of Brother Root in most everything except in awarding cash presents to those bee-keepers who invent or devise bee-fixtures. We do not have the money to put out in that line.

In another column of the same periodical, friend E. L. Pratt has this to say on the same subject:

With regard to paying big prices for contributions, I would remind the readers that the "Api" seems to receive its share of valuable matter, pay or no pay. I look at the matter in this light: A bee-paper is a sort of reformation herald for the pursuit, headed by a leader who has the "sand" to "man" the "tiller" and keep the forces abreast. We are all stockholders in reality, and our dividends are paid monthly, or weekly, as the case may be. The more real heart we put into it, the larger the dividends in valuable knowledge. To the publisher the receipts are small enough at best, and for that reason I do not object (rather encourage him) to deal in supplies, etc.

Then he also adds this ringing commendation, for which we make our politest bow:

Do you really understand what an undertaking it is to publish a 32-page bee-paper every week. I do, and can say that the task is an enormous one. We cannot be too hearty in our support of the old **AMERICAN BEE JOURNAL**, for in its success lies the hope of every man who has a dollar invested in bees. To pass it by, would be treason.

Winter Stores.—In an editorial in the *Review*, friend Hutchinson remarks that, for out-door wintering of bees, he wants about 20 pounds of food per colony, and the bees protected. For cellar wintering, 15 pounds will be sufficient.

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms before issuing their Catalogues.

Colorado Honey Crop.—The editor of the *Apiary Department* of the *Colorado Farmer*, remarks thus concerning the honey crop of that State:

Colorado is the only State in the Union that reports anything like a full honey crop this year. The yield is fully double, in pounds, to that of any other year in the history of the State.

The Colorado out-put this season will average 90 pounds per colony, the whole State over.

F. J. Murray, of Fort Collins, shipped 12 tons of comb-honey to Denver recently. This is undoubtedly the largest shipment of honey ever made by a dealer in this State. It is the product of the apiaries of Hon. N. C. Alford, Dr. C. P. Miller and J. S. McClelland. The carload brought \$3,000, at wholesale, and was all sold to one dealer in Denver.

J. A. Arbuckle, of Clover Lawn apiary, at Greeley, met with great success in bee-culture during the season just past. He has sent over four tons of extracted-honey to a commission firm in Denver, besides selling 1,000 pounds at home. Mr. Arbuckle extracted the first honey on June 23, and the last on Sept. 1. The largest amount extracted, in one day, was on July 1, when he took 900 pounds from the combs. This is a magnificent showing considering the fact that Mr. Arbuckle has only 140 colonies of bees. He sold the extracted-honey at 7 cents per pound, while the comb-honey brought 15 cents per pound.

Peerless Atlas.—The publishers of the *Peerless Atlas* have met with a delay in issuing the new edition, containing the promised Census Report of 1890, as they have not been able to secure the official data from Washington, as promptly as they anticipated. The result is that orders for the *Peerless Atlas* that have been sent to us during the last two or three weeks, have not yet been filled. We have been notified by the publishers that the edition has been completed and that all orders will be filled as promptly as possible, in rotation. Any who may have not yet received their *Atlas* will understand the delay, and may expect it in a very few days. The delay, as much regretted by the publishers as by us, has been quite unavoidable.

The Programme of the 22d annual convention of the New York State Bee-Keepers' Association (founded by M. Quinby in 1868), to be held in the State Agricultural Rooms, at Albany, N. Y., on Jan. 22-24, 1891, is as follows:

FIRST DAY—2 p.m.—Call to order. Reception of new members and payment of dues. Report of the Secretary, Treasurer, and Standing Committee. Exhibits of Bees and Honey at Fairs.—Thomas G. Newman, Chicago, Ills.

EVENING SESSION—7 p.m.—Out-Door Wintering of Bees.—J. E. Crane, Middlebury, Vt. The proper thickness of comb-foundation—Is it advisable to use full sheets or starters in brood-frames? Topic for discussion.

SECOND DAY—9 a.m.—Appointment of Committees. Shallow vs. Deep Brood-Chambers, Narrow Spacing and Fixed Distances.—N. D. West, Middleburgh, N. Y. Are we ready to adopt a standard for the American Italian bee? If so, what are the desirable characteristics? Topic for discussion.

AFTERNOON SESSION—1:30 p.m.—Receiving new members, Election of officers. President's address. What Constitutes a Good Bee-Periodical?—W. F. Clarke, Guelph, Ont.

EVENING SESSION—7 p.m.—How has the New Tariff Affected Our Branch of Agriculture? Free Sugar vs. Extracted-Honey.—F. B. Thurber, New York. What Our Market Demands.—Henry Segelken, New York.

THIRD DAY—9 a.m.—Artificial Heat to Promote Brood-Rearing.—S. Cushman, Pawtucket, R. I. Queen-Excluders for Comb and Extracted Honey.—John H. Martin, Hartford, N. Y. New Uses of Queen-Excluding Zinc Boards.—F. H. Cyrenius, Oswego, N. Y.

AFTERNOON SESSION—1:30 p.m.—Bee-Escapes, their Uses and Advantages.—C. H. Dibbern, Milan, Ills. Reports of Committees. Miscellaneous Business.

Pay full fare to Albany, and you will get a return certificate over any road coming into Albany (except the Boston & Albany), at one-third regular fare.

The headquarters of the Association will be at the Globe Hotel.

Samples of honey, apiarian supplies, or anything of special merit in the line of bee-keeping appliances are solicited. All articles for exhibition should be sent to Agricultural Hall, in care of the Association. G. H. KNICKERBOCKER, Sec.

Unsolicited and unexpected commendations are the most valuable, trustworthy, and acceptable. Of this kind, the following is a sample of the many indorsements of the *Home Journal*, which come to this office. Mr. Pond is an able attorney, a good judge of literary productions, and a correspondent of a score of good periodicals. He says:

Allow me to say this: There is no better or cleaner magazine for the home than your *HOME JOURNAL* published, whether we consider its tone—morally, typographically or instructively. It is in fact, just what its title indicates, an "Illustrated *Home Journal*."

JOSEPH E. POND.

North Attleboro, Mass., Jan. 6, 1891.

Convention Notices.

The Annual Meeting of the Ohio State Bee-Keepers' Association, will be held in Toledo, O., on Tuesday and Wednesday, Feb. 10 and 11, 1891. Full particulars as to railroad and hotel rates, and place of meeting, will be given later. Let all interested in bee-keeping make an extra effort to be present on this occasion.

MISS DEMA BENNETT, Sec., Bedford, O.
DR. A. B. MASON, Pres.

The Convention of the Eastern Iowa Bee-Keepers, will be held in the Dobson Town Clock Building, at Maquoketa, Iowa, Feb. 11, 12.

FRANK COVERDALE, Sec., Welton, Iowa.

The 2th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.

H. M. SEELEY, Sec., Harford, Pa.

A joint meeting of the Minnesota Horticultural Society, and the Minnesota Bee-Keepers' Association, will be held in Minneapolis on Jan. 20-22, 1891, in Guaranty Loan Building. A business meeting of the Bee-Keepers' Association, apart from the Horticultural Society, will be held at 9 a.m. on the 21st, to adopt a Constitution and By-Laws. The afternoon and evening sessions, on that day, will also be devoted to the bee-keepers. All who are interested in bee-culture should not fail to attend. An interesting and instructive time is expected. A number of prominent bee-keepers will be there. Prof. N. W. McLain, of the Minnesota Experimental Station, an expert on bee-culture, will give an interesting lecture. C. THEILMANN, Sec., Theilmanton, Minn.

The Annual Meeting of the Vermont Bee-Keepers' Association, will be held at the Addison House, Middlebury, Vt., Jan. 28, 1891.

J. H. LARRABEE, Sec., Larrabee's Point, Vt.

The Annual Meeting of the Ontario County, N. Y. Bee-Keepers' Association, will be held at the Court House in Canandaigua, N. Y., on Jan. 28, 1891.

MISS R. E. TAYLOR, Sec., Bellona, N. Y.

The Northeastern Michigan Bee-Keepers' Convention will hold its annual meeting on Wednesday, Feb. 4, 1891, at the Commercial House, in Port Huron.

W. Z. HUTCHINSON, Sec.

The Eastern New York Bee-Keepers' Association, will meet in convention with the State Association, Jan. 22, 23 and 24, 1891, in Agricultural Hall, Albany, N. Y., at 10 a.m.

W. S. WARD, Sec., Fuller's Station, N. Y.

Queries and Replies.

Keeping Brood-Combs.

QUERY 749.—How do you keep brood-combs while not in use?—Reader.

In a tight hive or box.—M. MAHIN.

I hang them in the bee-house about $\frac{1}{2}$ an inch apart.—H. D. CUTTING.

In an airy chamber, spaced 2 inches apart.—G. M. DOOLITTLE.

Hang them 2 inches apart on racks, in a dark room; and if worms should then get in, I fumigate them with sulphur.—J. P. H. BROWN.

They should be kept in a close room, and fumigated with sulphur if moths appear.—J. M. HAMBAUGH.

In close boxes. These are made just the right size, and hold three rows of combs.—A. J. COOK.

In the Spring I put them under a colony of bees, so that the bees must traverse them, when going in and out.—C. C. MILLER.

I hang them up in a light room where the air circulates freely, keeping them an inch or two apart.—R. L. TAYLOR.

I pack them into empty hives, hanging them about $1\frac{1}{2}$ to 2 inches apart. If kept well separated and watched for worms, there will be no trouble; or very little, if any.—J. E. POND.

During the Winter I keep them in hives because I have no other place. I put some this Summer in the second story, where the bees had access to them. Another season, if I have any not in use, I shall try the bee-cellar.—MRS. L. HARRISON.

In a dry, closed building, moth proof by the use of screens on doors and windows; and where the temperature is low, in the Winter.—DADANT & SON.

Keep them in a tightly-closed room or box, and smoke them occasionally with the fumes of burning sulphur. Put the combs in an empty whisky-barrel, with a few lumps of camphor, and head the barrel well.—P. L. VIALLOX.

I tier them up on the hives until late in the Fall, when all danger of moth-worms is over. After that, they can be kept in any place, away from mice, until

needed in the Spring. I have kept them tied up in cotton sacks all Summer. I can keep them in this way for any number of years, in the very best condition.—G. W. DEMAREE.

I do not always keep them because I get careless. If you have a very cool, dry cellar, the worms will not bother them there. They ought to be a little further apart than when in the hive—say one inch of space between them. If you can get spiders to build their webs among them, there will be no trouble.—EUGENE SECOR.

During the cold months keep them in any suitable, cool, dry place, away from rats and mice. In hot weather, it will be better to give them to the bees, to care for. A good colony of Italians will care for 2 or 3 sets of frames.—C. H. DIBBERN.

It all depends upon the time of year, and whether or not the combs have moth-germs in them. Any of the bee-books will tell you how to preserve empty combs.—JAMES HEDDON.

In the Summer time, I have never been able to preserve them unless the bees had the care of them. In Winter, they are better kept out-of-doors in empty hives, made secure against being blown over. Buildings which are more or less open to the weather, so that the combs may freeze, also serve well.—G. L. TINKER.

The bees will take care of the empty combs in the Summer season better than you can do it. In Winter they should be boxed up tightly, after being thoroughly fumigated with sulphur, if they have any moth-germs in them.—THE EDITOR.

If you have a desire to know how to have Queens fertilized in upper stories, while the old Queen is still laying below—how you may *safely introduce* any Queen, at any time of the year when bees can fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and is as interesting as a story. Price, bound in cloth, \$1.00.

Wavelets of News.

Color for Hives.

In painting hives, dark colors should be avoided, for in extreme hot weather the combs in such hives will melt down, while in a hive which is painted white, no damage will be done. Such melting down of combs, often comes in the times of scarcity of honey in the fields, so that robbing is started by the honey running from the hive, when the inmates are in no condition to defend themselves; and from this cause, and the spoiled combs, much damage is done.—*Farm, Stock and Home.*

Night-Work in the Hive.

Bees work all night, whenever there is work to be done; and there is always more or less to be done during almost every month in the year. Brood is fed at night, as much as in the daytime. Cells are prepared for the queen to lay in, and the queen goes on with egg-laying just the same. During the honey season more comb is built during the night than at any other time, and both pollen and honey are taken from the cells, where the workers deposit it during the day, placed where wanted, properly packed away and sealed over.—*Gleanings in Bee-Culture.*

When their labor is over for the day, they rest in chains suspended from the ceiling of their habitation, one bee clinging by its fore-feet to the hind-feet of the one above it, until it seems impossible that the upper one can be strong enough to support the weight of so many hundreds.—*Exchange.*

Dead Bees About the Entrance.

During the Winter season, it is very common to see quite a number of dead bees about the entrances of the hives. Many become alarmed at the sight of this, and conclude that there is something wrong, and, in their ignorance, tear up the colony, to make an examination, only to find that all is apparently right. This untimely handling and disturbance in cold weather, is very hurtful to the bees, and in all such cases there is no indication of anything wrong.

Bees die off daily, in great numbers, throughout the entire year, but during warm weather, when they have the liberty to fly every day, these dead ones are carried off by the colony, and they dis-

appear unnoticed by us. But, during Winter, they die and drop to the bottom-board and collect there, and on the approach of a warm day, the bees carry them to the entrance, and drop them outside. It is not unusual to find quite a handful of dead bees lying at the entrance, on such occasions. There may, at times, be as many as a pint of them, and no serious damage may be expected. All unprotected hives will produce more of these dead bees than those that are well protected.—A. H. DUFF, in the *National Stockman.*

Alfalfa-Clover Honey.

Alfalfa honey is not only the finest in appearance of any honey that I ever saw, but it is also equal in flavor. It is almost, if not quite, as clear as water, and yet, during a hot July day, it will scarcely run. It is as clear as a crystal, and exquisite in flavor. Very likely the producer has not a ton of such honey; but if he has, I should think it would be a small fortune, if he could get it before the class of people who buy gilt-edge butter, and things of that sort. And, by the way, we are using alfalfa honey on our table, day after day. I never ate any other honey that suited so well, and for so great a length of time. At present the outlook seems to be that alfalfa honey is destined to lead the world.—*Gleanings.*

Fertilization of Plants.

Bees serve as active agents in the fertilization of plants, and are not destructive in the least degree. They are profitable, because they gather and store up that which would be entirely lost, without their aid. They work in places that are rarely seen, and the fence-corners and neglected spots are often valuable pasture fields for them. Though regarded as resentful in nature, yet they can be cared for easily, for, like animals, they are conquered by kindness.—*Exchange.*

Degenerate Italian Bees.

I have for years kept Italians, bringing in a fresh imported queen every year or two. After keeping that up for a number of years, I reasoned that as there were very few other bees in the neighborhood, the Italian blood must predominate so much, that if left to themselves, my bees would very soon weed out the one-banded fellows. Al-

though I have had no pure blacks for years, I soon found that I had two or three colonies that were simon-pure blacks, at least so far as color was concerned.

Now the question is, did my yellow bees turn black? or, were the few surrounding blacks so powerful in character as to overcome them?—DR. C. C. MILLER, in the *Apiculturist*.

Bees do not mix the Honey.

Bees, in their search for honey, visit only one kind of flower on the same trip. This is not accidental, but it is a wise provision for preventing hybridization of different varieties from the pollen which bees always distribute in their journeys from flower to flower.—*Exchange*.

Extracting in Cold Weather.

If your surplus combs are not yet extracted, keep them in a warm room a half-day. Then the machine will as readily throw out their contents, if still liquid, as at any time during the Summer.—*Farm and Home*.

Bee Fever.

This is a peculiar contagious fever to which we are all liable; ministers, lawyers, and even doctors of medicine, have been known to yield to it in a way that is wonderful. I had an attack of it, myself, 12 years ago, and while the first stages were the most severe, it continues in my system to-day. Honey is an excellent medicine, but when given as a remedy for bee-fever, it will invariably have the effect of making the fever more intense.

Bee stings are said to be good for rheumatism and they are also good for bee-fever; I know of several cases where bee-stings have given permanent relief.

In the Spring of 1881, I had a shipment of very cross bees, from Mississippi, which came near giving me permanent relief; they pinned my clothes fast to me, and had about cured me, when I gave them Italian queens, and then they would not sting me any more. The result was that the fever came up to its highest pitch again.

In 1883, I "swarmed out" and went to work for A. I Root, at the Home of the Honey Bees, while my stay there was very pleasant indeed, a letter from home stated that my bees had wintered successfully; this was too much for me, and I returned to the parental roof, on the limited express.

The same season I succeeded in getting 1,600 pounds of honey from my 11 colonies, and increased them to 21, by artificial swarming.

The following season they increased to 50; the honey season was a failure, and I was obliged to feed them nearly two barrels of granulated sugar, in order to pull them through the Winter.

When it comes to the point of feeding 50 colonies that are almost destitute of stores, it comes near being a remedy for bee-fever. I might have been cured then and there if somebody hadn't whispered to me that everlasting sticking to a thing is bound to bring success.—WALTER S. POUDER, in *Indiana Farmer*.

Strengthening Weak Colonies.

If from any cause a colony becomes weak in the Fall, I have adopted the following plan to build it up with very satisfactory results:

I usually take off the surplus sections late in the season, and in them are quite a number of young bees that cannot well be driven out with smoke, neither will they desert the caps, or leave the sections after being placed in the cellar or honey house.

I take the sections in which the bees are clustering, to the colony I wish to strengthen, and after first thoroughly smoking the bees in the hive and sections also, I brush the bees off, in front of the entrance, and they will scamper into the hive as lively as in swarming time, and be readily accepted.

Thereafter young bees can be introduced from any hive without smoking, and without any objection on the part of the bees formerly introduced, or members of the old colony, as they have, by this time, become accustomed to the influx of strangers, and accept their presence as a matter of course, for they soon learn that they are peaceably disposed, and not there for the purpose of robbing.

A few bees from a number of prosperous colonies will never be missed; whereas, if a frame or two is abstracted, the loss will be apparent next Spring, and the bees in those hives, thus robbed of stores and brood, will not commence working in the surplus arrangement, nearly as soon; not until the loss has been made good. It will not do to borrow from Paul to pay Peter, in a wholesale way; at least, that is my theory. One colony in my apiary, built up in the manner above mentioned, are, at this writing, as strong as the strongest.—A. C. TYRREL, in *Apiculturist*.

Address to the Honey-Bees.

W. J. CULLINAN.

Now rest, oh, busy toilers !
 Your working days are o'er ;
 You "made hay while the sun shone,"
 From hill and dale you bore
 The sweets we prize so highly,
 And love to have in store.

You've won sweet rest, enjoy it,
 And if you can, be gay ;
 Sip deep your cups of nectar,
 And this shall be your pay,
 For honest, faithful service
 You've rendered day by day.

We strove to guide your efforts,
 And sought, without abuse,
 To turn them in our favor,
 And mould them to our use—
 And by manipulation
 Endeavored to induce

Your tireless, toiling forces
 To work as we should guide,
 And bear the precious nectar
 From fell and flowery side,
 And store in white an' snowy comb—
 The apiarist's pride !

Yet, lo, we did not drive you—
 Let instinct do that part—
 Perhaps you work'd no harder,
 Play'd just as light a part,
 As if you toll'd in tree or cave,
 Unfettered by our art.

No doubt you dine as richly,
 Forsooth, shall dine as long,
 As bees out in the forest,
 Or rocks and caves among ;
 And will come through the blizzards
 In numbers quite as strong.

So "calmly rest, and sweetly sleep,"
 In that "ideal hive" of mine.
 Till the snow has left the hillside,
 And the sun has warm'd the vine ;
 And warmer winds an' softer skies
 Proclaim th' approach of spring-time.

Then, wake ! and to your labors
 Go, with your old-time zeal ;
 And labor then, as always,
 Unto your master's weal—
 Proclaiming thus the wonders
 That little things reveal !

Quincy, Ills.

Why Complain because others do not agree with us ? a little reflection would show us that each one's conception and understanding, must be according to their culture and experience.—*Exchange.*

Topics of Interest.**Essays at Conventions.**

EUGENE SECOR.

I have not been as regular an attendant at, nor of as long experience in, conventions as Dr. Miller, but I cannot agree with him in the essay controversy.

In my limited knowledge of convention work, I have been led to believe that those meetings were the most satisfactory where the principal work was blocked out in advance, and some plan followed. It does not always happen that the ones assigning topics make the best selections, or the best persons to treat them, but if a mistake is made one year it need not be repeated the next. It is impossible for persons in charge of such matters to always know the best men to put on the programme. But a convention called together, without any definite work for it to do, is a good deal like a mob, and there are but few presiding officers capable of directing the deliberations of such an unwieldy crowd.

I believe in assigning topics for discussion and designating a member to lead. Whether he does so by a carefully written paper, or orally, depends on circumstances. If a report of the meeting is to be published, and no stenographer is present, I think the written paper best. In any event it ought to be as well prepared as the ability and time of the leader permits. The subject, then, is before the convention for discussion.

I agree with the Doctor that all subjects are not proper for such meetings, but who is to be the judge ? We are not all made after the same mental pattern any more than corporeal. I might get the laugh on the Doctor by saying a bee convention was no place to tell "How Sockery Set a Hen," nor to illustrate the weakness of parental government, when besieged by juvenile questions, while reading the story of George Washington—but I will not do that because I like my intellectual food seasoned quite as well as I like pepper and salt in my victuals, and I go to conventions quite as much for the social enjoyment I get out of them, as for any new thing I expect to hear pertaining to bee-keeping.

I wish to say though, in the matter of essays and discussions, that I think the sessions ought not to be prolonged to interfere with the cultivation of those social qualities, which are only to be discovered by closer personal contact than

even a convention allows. I am glad that Mrs. Harrison calls for a recess once in a while, when she is present. It is hard work to sit in a public audience 10 hours a day and behave well. Essays are not the cause of these long sessions, but the discussions which follow. Perhaps there ought not to be so many of them, curtail, if you will, but do not prohibit.

Did you ever see a public meeting of any kind, from Congress down to the "town meeting," where a few persons did not do all the talking? The only exception I know of is the Methodist class meeting, where each one is called upon to express himself. If that plan could be followed at bee conventions perhaps the essay might be left out. But it cannot. All will not talk even if called on. I would put the non-talkative on for essays and let the voluble ones air themselves on their feet afterwards, under a rule that no one should talk over 5 minutes at a time, nor more than once on the same subject, until all have had an opportunity to be heard. I do not agree that it is necessary or desirable that everything should be written from a practical standpoint.

A good many attend conventions who are not specialists. If every thing were planned for the latter only, it might not interest the others.

Finally, Doctor, will you not admit that we had as good a time at Keokuk with essays, as at Columbus in '88 without them.

Hot Weather and Thunder Storms.

"RAMBLER."

I wish to congratulate "the old reliable" upon its new dress and improved appearance in general. If the editor after the several poor seasons we have had, has the courage to make such improvements, the bee-keepers, certainly, should also keep up courage and prepare for the grand honey flow that is coming by and by.

Writing of improvements reminds me that there seems to be an epidemic of this sort among the Journals. The *Review* was the first to put in its enlarged form and beautiful title page. A journal so neatly gotten up is worth many dimes a year just to look at.

The *Apiculturist* comes next with its bright face, and its characteristic ideas, all fresh and breezy. Our literature without an Alley would be dull indeed.

Bee-keepers can well be proud of their journals.

While chatting with you, Bee Journal, I wish to give a pointer to Mr. Bull, as he invites experience on page 810 of last Vol. I would say that my experience is directly contrary to that of Mr. Bull. The greatest and most encouraging honey yield ever produced in this county, was during a season of frequent and sudden thunder storms. The weather was extremely hot, and the bees were working upon basswood early and late. Several short but explosive thunder showers would come up during the day, and after each, how the bees would work. They drew out in such force that we expected to see hives and all go to the woods, but they were too heavily loaded with honey to move. One hundred pounds per colony was our average yield that year. Give me the hot weather and the thunder storms.

Hartford, N. Y., Jan. 6, 1891.

Identification of Foul-Brood, etc.

R. L. TAYLOR.

Though I discussed the subject of foul-brood at our last annual meeting, I have, at the request of our secretary, prepared a sort of supplemental essay on the same subject.

And, first, I shall add a further word to aid in the identification of the malady. Enough has been written about sunken and perforated cappings, and the color and viscid character of the brood, having recently died of the disease.

In the case of weak colonies generally, and of all colonies during the breeding season, some of these indications will be found, if the disease is present, and will furnish certain means of a correct diagnosis; but it is to be noted that after the breeding season is well over, a strong colony, though badly diseased, exhibits none of these indications. The cappings, if ever present, are all nicely cleared away, and the dead brood is entirely dried up; mere scales, almost of the color of the comb itself, lying fast to the lower side of the cell, and drawn back, more or less, from the opening.

I have samples of affected comb with me, one of which illustrates this point, though the sample is hardly a fair one, as the scales resulting from the dead brood are more apparent than they usually are, being less drawn back and thicker, and rather darker than they are often found.

To detect the disease in strong colonies, some little time after brood rearing has ceased, open the hive and apply your nostrils directly to the combs, as they hang in the hive. If the disease is present, to any extent, and your olfactory organs are sensitive, you will detect an odor more or less strong which may be described by the term "old." But not many, at least at first, could say, by this test, with any degree of certainty, whether the bees of that colony were diseased or not. It is to be taken only as an indication. Now, take out 3 or 4 combs, one by one, from near the center of the brood nest, and hold each with the bottom bar from you, in different directions, until the light strikes well into the *lower side* of the cells, when, if affected, the scales I have described are very evident. The sample makes this plainer than any amount of description could do.

In contending against the evil, there is nothing so important as an active knowledge of the sources whence the danger of spreading the contamination arises. With this knowledge, I am convinced that there is little necessity for fear that the disease will spread to healthy colonies, if only the sources are within reach of the apiarist. If many wild bees, among which it has a foothold, are in the vicinity, it must become eradicated there, in the course of nature, before the apiary is safe, for every wild colony affected, will, in time, surely die, and its honey, if any be left, will be appropriated by other bees, and the plague unavoidably disseminated. This danger cannot be well guarded against, but those at home may easily be reduced to a very small figure. They fall under three heads: those from affected honey, from affected combs, and from affected hives.

Under the heading of hives, is included, of course, all their paraphernalia. I think the principal danger from this source, arises from affected honey, which may have been left on the parts of the hive, by daubing, or otherwise. No bee should be allowed to visit them, and as soon as it may be safely done, they should be boiled in water, scorched with flame or burned up. Either method is effective.

Affected combs are dangerous, not only from the honey, but also from the dead brood, which they contain. Every dead larva is a bundle of seeds, and when moistened by honey, new brood, or otherwise, they are released and carry death wherever they go. Such combs are safely rendered innocuous by fire, or

boiling only. The extremest caution, in changing combs from one colony to another, should always be observed. There is no more certain and rapid way of propagating the malady.

Infected honey itself, however, is the chief medium by which foul brood is disseminated, and so, in it, is the principal source of danger. The bees are sure to contract the disease thereby, whether they obtain it by deliberate feeding, on the part of the apiarist, by gathering up what is carelessly allowed to drip and to be left exposed about the apiary, or by robbing.

When once pointed out every bee-keeper should be able to guard against the danger arising from the feeding and the dripping of honey; but to secure protection against robbing extraordinary care is often required.

If bees were deprived of their disposition to rob, foul-brood would soon be eradicated. This cannot be done, indeed to one who has had to deal with the plague, this disposition seems to be increased thereby. The more powerful nations of Europe keep their eyes upon the Turk, as the "sick man," watching for the occasion when they may profit by his dissolution. The bees emulate the example of the nations. As soon as they catch the odor of the disease, issuing from a hive, they promptly label it "the sick man," and eagerly watch and wait, and at length, unlike Russia, Austria and the rest, instead of holding each other in check, they all turn in at the nick of time to complete the work of destruction, and like many a human individual and nation, find the seeds of death wrapped up in their ill-gotten wealth.

From infected colonies that are reasonably strong, and in good heart, with sound hives, having moderate entrances, I would not apprehend immediate danger, but would keep a sharp lookout for the impending decline. It behooves him, whose bees are infected, whether or not he obeys the general injunction, to "keep all colonies strong;" to be instant in his efforts to keep all diseased colonies strong. No one will understand me to advise building up such colonies. I mean only that no weak one, in a diseased condition should be tolerated for a single day, and indeed it is to be hoped that this advice will be seldom applicable, for it is to the interest of every apiarist to banish the disease, by the most effectual method, as speedily as possible.

I need hardly add, that the taking of bees from a diseased colony, and adding

them to a healthy one, would as certainly convey the disease in the honey carried, as though it was fetched by robbers.

I shall close here, for I am sure that if due and timely heed be paid to the directions given herein, and in my essay of a year ago, no one need be greatly alarmed, nor very seriously damaged, by foul-brood, and I only hope that none of you may ever need even to call them into exercise.—*Read at the Michigan State Convention.*

Adulteration—The Bee-Keepers' Union.

JAMES HEDDON.

At our late State convention at Detroit, many of our members were greatly surprised to find several lots of adulterated honey still upon the market, especially in the metropolis of this State, where we were in convention assembled. It was all labeled "Michigan Strained Honey" or something of the kind, which clearly gave it away to those who were posted in such matters, to say nothing of the flavor being wholly different from that of almost any grade of pure honey.

The question came up what to do. It was finally proposed to have a trade mark that was protected by law, and which every bee-keeper who belonged to the association, procuring the same, could use. Then the daily papers, and, in fact, all the papers of the country will take the thing up. I think I know just how to get them to do it, and that too, without charge, and soon consumers everywhere will be educated to the facts that producers never adulterate because they cannot afford it, and that they can instantly discern which packages were put up by producers and which by adulterators or city packers.

Then it was proposed that the National Bee-Keepers' Union should get the trade mark, and all persons belonging to it, and only such, should have the right to use it. The writer remarked that he did not believe the government would issue a trade mark to a corporation to be used legally by its various members. This matter was left in doubt, for the committee, which was then and there appointed, to decide upon.

After the convention I visited a friend and old schoolmate, one of the best patent lawyers in the United States, who resides in Detroit, and he cleared the matter up immediately. A trade mark will cost \$40, and is good for 30 years. He immediately agreed with my suspicion, and at once made it a belief, or

knowledge rather, that the Union could not procure a trade mark, unless they were incorporated, and then it would not be legal protection to its various members whose business interests were entirely separate from each other. "But," says he, "Any one member of the association can procure the trade mark, which will cost \$40, and then he can transfer individual rights to as many persons as he sees fit, guaranteeing each one the same protection as the person to whom it was issued."

It seems to me that this is liable to be the result. It will make it an object for every person who raises honey to sell, to join the Union, for the trade mark alone will be worth more to him than the annual dues to the Union, and the \$40 which the trade mark will cost, can be taken out of the Union treasury, and will hardly be felt. The president of the Union or some other individual could procure the trade mark for all, the design of which should be something striking and unique. Now what shall it be? In a council of many, surely wisdom exists and something just right should be brought forth, and no doubt will be. Do not forget, Mr. Manager of the Union, that any person joining the same who has trouble on hand, or known to be brewing at the time his application was made, is not eligible to the protection of the Union for that case. Please make that clear to your solicitors.

This trade mark will, in reality, be a patent. It is the same thing, produced in the same way, and protected in the same way, by the same government, and solicited through the same office.

But now, friend Newman, I am happy to state, that it will receive no opposition from our friend A. I. Root. We had him at this convention, and we had a good time discussing the question of the right of property in inventions. We told him what we thought, he told us what he thought. President Cook, our State entomologist, fairly sat down on him, of course in a friendly spirit, and as though he was not enough, great big Dr. Mason came down "ker-thump" and our State senator and lawyer, as well as the veteran bee-keeper, R. L. Taylor, threw in his mite, and finally, friend Root said he was sorry if he had ever given the idea to his readers that patents were not honorable property. He did not mean to do it, he said, but Professor Cook said he certainly had done it, for he knew that was the impression gathered by his readers. We all hope hereafter, that friend Root will be fairer with this most dignified of all

property rights, because it must not be forgotten that one of the greatest jurists living or dead, said:

"The right of property which an inventor has in his invention is excelled in point of dignity by no other property-right whatever. The benefits which he confers are greater than those which he receives. He receives from the Government nothing which costs the Government or the people a dollar or a sacrifice. He receives nothing but a contract which provides that for a limited time he may exclusively enjoy his own. Letters-patent are not hurtful monopolies."

Now let the Union procure this patent mentioned above (the trade mark), for I believe it will result in protection to honey producers, and tend to largely swell the membership of the Union, which, it now goes without saying, has been one of the best and most useful organizations ever originated by bee-keepers.

Dowagiac, Mich.

Apicultural Inventions.

ERNEST R. ROOT.

Your committee has assigned a rather difficult subject for me, and I must acknowledge that I am somewhat at a loss as to how to handle it. Webster's New International says, that an invention "is the act of finding out something which has not before existed." This last clause would throw out of the category nine-tenths of the so-called inventions. In this connection it should be observed that the field for original invention is narrowing down. The older the science or industry, the more limited the opportunity for real invention or startling innovation. Inventive genius has, then, to content itself simply with the improvements upon different applications of old or existing principles.

In electrical science, James Heddon tells us, on good authority, that all the inventions of the present time are simply mechanical improvements, and that no great innovation may be looked for, and I would add that apiculture is no exception. Our own Langstroth and Quinby gave us the first practical movable-frame hive, Major Hruschka the first extractor, and Mehring the first real comb-foundation. These three are the great inventions in our beloved industry, and I think I can say truly, that, with few exceptions, all others are simply applications or improvements. Am I stepping on somebody's toes? No.

It takes a genius to improve or to make a new application of an old idea.

Now then, in answer to the question, "Are Apicultural Inventions in Demand or Excess?" I answer, "Yes," and "No," to both. Although there may be an apparent contradiction in this, there is none in reality. Yes, apicultural inventions, or, if you please, improvements, are in demand. There never was, and never will be, a time in our history, when some invention will not be needed to accomplish certain desired ends. We often hear it said, that, if some enterprising Yankee would get up an invention to accomplish so-and-so, he would make his fortune.

Much has been said about the world not rewarding inventors. There is, no doubt, some foundation for this, but there is more ado made about it than the facts really warrant. The world at large is looking for, and ready to reward, some Edison, some Westinghouse, some Watt, some Ericsson, or Gutenberg, to invent or discover some device or process whereby certain economic ends may be accomplished.

As I have already intimated, our industry is one of the old ones. Since we have had a Langstroth, Quinby, Hruschka and Mehring, we cannot expect to make any startling innovations, but there is a big field yet for *improvements*.

Well, if apicultural inventions, or, if you please, apicultural improvements, are in demand, what are one or two of them, for example? As to implements, I would suggest that we need a good reversible extractor, that shall not be too large or cumbersome. Whether such can be obtained, is a question. Again, we need some method whereby all bee-keepers can prevent swarming, and yet not interfere with the honey crop. There are several ways of preventing it, but none that seem to be generally accepted or adopted.

These are but two, and I might suggest others, but I will sum all the rest of the needed inventions into this: We want inventions, or new methods, whereby we can produce better and more honey, and do it more cheaply. We have seen that, during poor seasons, it is a difficult matter to raise the price of honey in proportion to its scarcity.

What we must have, then, is cheaper production. Possibly what we need is fewer fixtures and fewer inventions, and more economy in labor and in time. If that is the case, the field for improvement is more in *methods* than in the *invention* of devices.

I have shown that inventions are in demand. I now propose to touch upon the other side of the question, namely, that they are in excess. Some inventions are like some men—it were better that they had never been born. Many of the so-called inventions have been a positive curse to our industry. Beginners, and over-enthusiastic bee-keepers, have adopted them at a large expense, only to find that they were a delusion and a snare. And, too late, they discover they might have tried a few to see whether that number would justify the adoption of a larger number.

In my travels recently among the bee-keepers, I ran across three or four, who, having been over-enthusiastic in regard to the merits of a certain hive, had made and put into operation anywhere from 50 to 500. They had carefully tried them, and had found them wanting, and, at the time of my visit, I found the hives stacked up by themselves, as it were, a monument of apicultural foolishness, and their owners well nigh discouraged. Of course, they argued that bees did not pay very well, and had come to the general conclusion that the hives recommended by Quinby and Langstroth were best, after all. These are by no means isolated cases. I hear of it through correspondence too frequently. It behooves editors, then, to be careful what they recommend, or place before the public.

Perhaps it would not be too sweeping to assert that about nine-tenths of the apicultural inventions are absolutely useless. They are a damage to the poor people who are duped by them, and a positive loss in time to the inventor. Impractical inventions, as a rule, are dreamed out by impractical men, and it would be better if they never appeared in the pages of a bee-periodical.

A good many things that we younger ones *think* we have discovered, were years ago mentioned and described by Father Langstroth and Father Quinby. The most, I think, we can expect to do, is to improve upon some old method or device. While I would not discourage invention, I certainly would warn the novice against wasting too much time in trying to get up something that will be vastly superior to anything else ever thought of, or dreamed of, by the fathers of apiculture.

There is just one thing more I should like to speak of, although it is a little foreign to the treatment of the subject as above; and that is, a sort of jealousy among some of our apicultural inventors as to who first originated or devised this

or that thing. The priority of claim rests not upon either one of the disputants, as a general thing, but upon some poor obscure bee-keeper who does not care, who may have the credit of the idea, so long as he and his bee-keeping friends are benefited. He is not going to lie awake nights to worry over it, anyhow.

I speak of this, because I have seen a little undercurrent in some private correspondence that passed through my hands, and as long as the idea is simply an improvement upon an old method, and not legitimately an invention, what matters it who has the credit? If we are jealous at all, let us be jealous for each other—jealous that some one else may have the honor rather than we.—
Read at the Michigan State Convention.

Some Apicultural Notes.

J. M. YOUNG.

A mild, pleasant Winter.

The New Year came in like a lion in this locality, with a northwest wind, accompanied with light snow.

Bees were out enjoying the genial warm sunshine, some two or three days during the holidays.

My notes written for the AMERICAN BEE JOURNAL, will be chiefly directed to beginners, but specialists may read them too, if they want to.

Closed-end frames "don't hit us" very well.

THE AMERICAN BEE JOURNAL comes to my desk this week, in a brand new dress of beautiful clear type. It is now a 2-column, 32 page folio, and chock full of reading matter.

Dr. Miller, a prominent apiarist of this locality, is fixing up his business to leave us and go south for his health.

I have quite a lot of extracted honey that has not candied yet, and the prospects are that it will remain in its liquid state all Winter. It was gathered from Fall blossoms and from a rosin weed that abounds abundantly in this vicinity.

Now is a good time to post up on Bee literature during the long Winter evenings. If you do not take a bee-periodical, subscribe at once, for you cannot keep bees intelligently unless you keep posted. The AMERICAN BEE JOURNAL and *Gleanings in Bee Culture*, take the lead over all periodicals published on this subject.

Preparations for next season's work should begin now. A great deal can be done during the Winter toward fixing up boxes, refitting hives and a thousand other things that will have to be done before a crop of honey can be secured. Now is the time to do it. If you have not a house or work-shop to work in, you should have.

You will make more money from your bees by letting them swarm naturally. If you want to work bees just for fun, and have plenty of money to spare, by all means use the artificial method. I work bees for the money there is in them and not for fun.

I only obtained a little over 1,500 pounds of honey this season all told. Remember, I only had 41 colonies to start with in the Spring, and from this number I only obtained 20 new colonies. I well know that this is a bad story for an experienced apiarist, but I wish somebody would tell me how to get a better result in a poor season.

"Stray Straws," edited by Dr. Miller in *Gleanings*, takes my eye, and I believe is going to be interesting.

Ventilation in Winter Repositories, etc.

E. C. EAGLESFIELD.

About 8 years ago I bought 3 colonies of bees in Langstroth hives, I got them in the Fall to winter them. I placed them against the south end of the house facing them south, packed straw all around, except in front and put an old sap pan over them to keep the rain off. I found them all dead before Spring, death being caused by too little ventilation. There were 5 colonies when I got them, with lots of honey.

As I was away from home that Summer most of the time, I did not buy any more bees, but the next Spring I bought some more and they increased to 9 colonies. I placed them in the cellar and before Spring the mice had destroyed 3 colonies. Since then I have always kept strychnine for the mice with good effect. I take a cookie and moisten one side, then place the crystals of strychnine all over it and lay it where nothing can get at it but mice and rats. I then bought a few weak colonies which made 11, spring count, and they increased by the Fall to 48. My best colony, in a box hive, gave 8 swarms, and as it was bees, and not honey, I wanted, the swarming pleased me. I fed them about 500 pounds of sugar for Winter stores, and they wintered nicely, but when I set them out in

the Spring I thought my queens were all dead and that the workers were laying. There would be a spot on the center combs with a dozen eggs or more in a cell, some just laid, but the most of them shriveled down very small. Things changed in 3 days when the bees began to get pollen, and I was happy when I found all my queens laying and brood being reared well.

My bees increased that year and the next, to 150 colonies, and 4 years ago I got 3,000 pounds of white clover honey, the most of which brought me 15 cents per pound, which disappointed some persons who said my bees would bankrupt me. They more than paid all the expense I had been to. That Fall I sold all my bees but 25 colonies, and moved them 15 miles to where I now live. As the cellar was in bad condition, only 11 colonies survived. They were in the finest condition when placed in the cellar.

A neighbor, who bought 25 colonies of me, never lost a colony. I moved his at the same time and the same distance, as my own, but they were placed in a different cellar. I mention this to show that it was not the pollen that killed mine, but the poor repository, as the condition of the 2 lots of bees were as near alike as 2 peas.

The next Summer I rebuilt my house and in the Fall placed 16 colonies in the cellar. All came through the Winter and Spring strong, without the loss of a single colony.

The next Winter I put 74 colonies in the cellar, with the same result as the previous year, so a year ago last Spring, after buying 8 more colonies, I had 82 to commence the season with. They gathered 9,300 pounds of comb-honey and 700 pounds of extracted, and came through last Winter and Spring without losing a single colony. They had increased to 137 colonies and I sold 40 in the Fall, so that left me 97, Spring count. They increased (including my nuclei after being united), to 135 and I placed them in the cellar on Nov. 6, which was 9 days earlier than I ever placed them in before. They have every appearance of wintering nicely so far, and if nothing happens to cause the cappings of the honey to crack, I expect every colony to come through all right.

I think nearly $\frac{1}{2}$ of the bees in this section died last Winter. There was only 1 colony died out of the 40 I sold last Fall, and that, I think lost their queen in moving.

Last season was the poorest for Honey I have ever known, I think many colo-

nies will starve this Winter if not fed, that is, colonies kept in box hives and black bees who are not looked after.

My bees are Italians, and I have never yet found them short of stores in the Fall. They did well last year, considering the poor season, and gathered 2,500 pounds surplus, many of the hives being too full of honey to handle well, some weighing 80 pounds with the cap off, when 50 pounds is the usual weight for Winter.

The honey this season is dark, being gathered from mammoth and alsike clover. A neighbor told me that my Italians were just swarming on his mammoth clover. I would like to know if anyone has had any experience in this clover as a honey plant.

I would like to say something about the cause of bees dying in Winter, but you will probably think this article so long and dry, that the waste basket will be the place for it. I used to think so, when they were taking up so much space with the pollen theory. Now I believe that pollen will produce bee-diarrhea, but do not think it is the cause of so many bees dying. I find that extracted-honey, if it be so thick that it will not run, if placed in a damp cellar over night, will become so thin before morning, that it will run like water. Then, if placed where it is a little bit warmer, it will soon sour and kill bees every time, if they are confined. The reason why bees winter better on sugar syrup, is that it does not dilute and sour like honey. Just try it and see.

If a colony of bees are left out till the outside combs are frozen so as to crack the capping, the honey will sour, and good-bye bees; or if there be much dampness in the hive, so that the combs are covered with drops of water, it will have the same effect.

Some people say that honey dew will kill bees; my bees never wintered better than last Winter and some hives were full of it. It is not the kind of honey, it is not the pollen, but it is simply the condition of the honey.

We are eating honey 2 years old, which is thick and waxy, and, although some cells are not capped, it is not granulated a bit, and I have had it 3 years old just as good.

My honey is kept near a stove-pipe, where there is fire once a week in Winter; this keeps it all right. Our pantry is damp, I placed a crate of this honey there for a few days, and all that was not capped became very thin, and is not fit to eat.

Berlin, Wis.

The Best "All-Purpose" Queens.

W. Z. HUTCHINSON.

The topic that has been assigned me by the secretary is: "The best all-purpose queens, and the best manner of rearing them." I have wondered quite a little why he used the words "all-purpose." I supposed queens were all for one purpose, that of laying eggs. I do not suppose I would rear them any differently, if I were to have their offspring engage in storing extracted-honey, than I would if their progeny was to be engaged in the production of comb-honey. If I were to engage in rearing bees or queens for sale, I suppose that I would not attempt to rear queens differently in order to endow them with different qualities.

In the premium list of fairs, I have seen premiums offered for an "all-purpose" bee-hive, that is, all things considered, a hive that is best adapted for raising either comb or extracted-honey, or for either cellar or out-door wintering. I can see how the words—"all-purpose"—might be applied to a hive, but when applied to a queen bee, they lose their meaning.

I might say, in passing, that I am opposed to an "all-purpose" *anything*, whether it is a queen bee, a bee-hive, or a new milch cow. These combined "all-purpose" articles, must succumb to the *special* purpose machine.

While I have criticised the use of the words "all-purpose" as applied to queens, I am willing to admit that much of our success centers in the queens. I cannot go so far as some, however, and say that all centers in the queen. Of the factors under our control, that go to make up our success, I think location, hives, combs and management, are fully as important as the queens.

We need queens that are sufficiently prolific to fill the combs of an *ordinary* brood-nest in the early part of the season. Many plead for extraordinary prolificness as a very desirable quality in a queen. If queens were expensive, costing even \$100 each, there might be some excuse for desiring prolificness in a queen, but, as they are ordinarily reared by the bees, when left to do this work themselves, they practically cost nothing, and there is no excuse for not having enough of them, so that there will be no need of "horse-whipping" them, as Mr. Heddon puts it.

As to the rearing of queens, I know of no better way, for the honey producer, than that of simply allowing the bees to

follow their own instincts. Young queens, those under two years of age, usually are the most desirable. They begin laying earlier, fill their combs more completely, and bring their colonies out in a more populous condition at the beginning of the white honey harvest. There is less disposition to swarm with young queens, and the same may be said in regard to the building of drone comb if swarming occurs, and foundation is not furnished.

As to the rearing of queens artificially, so to speak, I should strive to secure the same conditions as those under which they are reared naturally. There must be warmth, food in abundance, plenty of nurse-bees, and nothing but eggs or just-hatched larvæ for the bees to develop into queens. As to the details of commercial queen-rearing, each breeder is a law unto himself, and I think I have now said enough to start the discussion upon "The best all-purpose queens and how to rear them."—*Read at the Michigan State Convention.*

Mode of Wintering Bees.

O. R. HAWKINS.

I put 5 colonies into Winter quarters about one month ago, one of which I am afraid I shall lose before next Spring. My method of wintering is very simple, yet it is as good as the more costly way. I nailed 2 sticks to my stand, put a top piece from one to the other, and then braced them well and put my hives all together and stacked corn-stalks around them on 3 sides, leaving the south side open.

To keep the corn-stalks in place, I put 2 pieces of wire about them, 1 near the top, and the other at the bottom. A piece of rope or old cord would have done just as well as I used old cord the two previous Winters.

When Spring comes, all I have to do is to unfasten the wire, throw the stalks in the stock-yard, give the frame a lift, set the hives in their old places on the stand and everything is in order.

The apiary is in a nice grove, or more properly speaking, a strip of oak and pine trees, 20 feet across and several hundred feet long, and a more beautiful spot cannot be found.

Two years ago I saw that the bees were in great need of something to light upon when they came to the hive, and to fly from when leaving it, so I invented a fly-board. It sits snugly up to the face of the hive and if the wind or anything

else troubles it, put a nail, or screw, through it into the hive, or stand.

I placed a colony in for the Winter, and when I looked at it yesterday the bees were in splendid condition. Do you think they will freeze before Spring, or die from anything else? They were a small colony and only filled their hive half full of comb, which was packed with honey.

The weather has been fine though severe, and windy at times, I could not have wished for better. The prospects for next season look good. The last hive in the apiary in Brookhaven, the nearest town east of me, has been destroyed by moths. The apiary at East Patchoyac has been gradually reduced from 27 colonies to 3. In a year or two I will be the only apiarist left for miles around. I have increased from 2 colonies and learned from experience.

Bellport, N. Y., Dec. 24, 1890.

Moving an Apiary a Short Distance.

R. C. AIKIN.

A question often asked is: "Can I Move an Apiary a Short Distance without loss." About Nov. 1, I moved an entire apiary of 80 colonies, a distance of about 400 feet. I was preparing to pack the bees for Winter, so I built the cases, or packing boxes on the new grounds.

When all was ready and the bees were all in, I stopped all entrances and at once proceeded to move them. I made a small sled by nailing boards on 2 pieces of 2x6 about 6 ft. long. One horse did the moving, taking 4 to 6 colonies per load. All hives were left closed until the whole were moved, the old yard cleaned up, and as thoroughly changed in appearance as circumstances would admit. I then proceeded to mark each hive. The hives were placed in the boxes, or clamps, ready to be packed for Winter, and so were in long rows and about 6 inches apart.

The marking was done as follows: I took scraps of board, odd sizes and shapes, and placed alighting boards in front of the hives, so that no two hives adjoining, should look alike. Pictures, colored papers, pieces of pasteboard, tin cans, etc., were tacked on the front of the hives in various positions, and pieces of boards and sticks leaned up in front for them to "bump their heads against." Now all were liberated, (this had best be done just near the close of the day when the flight will be short), and finding all

completely changed they marked the place well before leaving for longer flight. Quite a few went back to the old location, but after flying about a few minutes, would return to the new place. I could not detect a particle of loss and they had no trouble in finding their hives.

Let me also give some experience in marking hives at

MATING TIME.

The past season I was handling 2 out-apiaries. They were run for honey alone, no increase being allowed and all queens removed during the honey flow. Most of the queens were killed and each colony allowed to rear one queen, and so re-queen the whole apiary.

One of the apiaries, 65 colonies, was located on open ground, with the hives in long rows and as close together as convenient to work between. Because of lack of time, this apiary did not have the hives properly marked so as to be easily recognized by the queens. The result was that between $\frac{1}{4}$ and $\frac{1}{3}$ of them were lost in mating.

The other apiary, 60 colonies, had the hives placed in more varied positions, hives farther apart, little flags, boards, papers, etc., placed in front, besides having the advantage of some natural marking such as small trees.

In this apiary only 4 queens out of 60, were lost in mating.

This difference was due alone to the markings. Each had nice weather, clear, dry and warm, right in the midst of honey flow and only 4 to 5 days difference in time, and located about $2\frac{1}{2}$ miles apart. It pays to mark well at mating time.

Holyoke, Colo., Dec. 25, 1890.

Honey Crop from White Clover.

A. H. DRAPER.

The main dependence for a crop of honey in the United States, with the exception of California, the Rocky Mountain States, and perhaps Wisconsin, is white clover.

Now, if the whole nature of this plant could be thoroughly understood, and I do not see any reason why it could not, it would be a great blessing to the fraternity. I believe the percentage of a white clover crop can be pretty closely estimated for the ensuing season, as early as January. I wrote to Mr. A. I. Root 3 or 4 years ago, my letter was published in *Gleanings* at the time, I think it was in the Fall of 1888, saying

that the heavy Fall rains would enable white clover to spring up in abundance, so that we could expect a heavy honey flow the following Spring. In an essay, read at the Capital Bee-Keepers' Convention, held at Springfield, Ills., Sept. 26, 1890, I called attention to the same thing. (Published on page 70Q, of the BEE JOURNAL.)

We had just had two heavy rains, the last one on the morning of Sept. 26. This made an encouraging prospect for a white clover crop for next year. But from that time until Dec. 24, we had another drouth. So that at this date the prospect is not nearly as encouraging as it was on Sept. 26.

Now for the situation. I have examined all the white clover, within several miles of my home apiary. Generally the side hills and the high lands are almost bare of white clover, and blue grass seems to hold possession, but on the low ground in the valleys and hollows, and along the ditches, white clover is pretty well set. There is nothing like as much white clover within reach as there was last year, or the year before. At Springfield, and westward to Keokuk, there seems to have been less rain than there was here during September, October and November. Still the soil is different in that region, and I do not believe a drouth in July or August will affect the white clover yield of nectar the following season. But let the drouth be continued later in the season and the chances for a crop are very slim.

A good illustration is furnished by the corn crops. If a shower comes when the corn is beginning to set, it is almost sure to make a crop. This season, although corn is almost a failure in several States, there are many places where, on small areas, they got a few showers just in the nick of time to make good crops. Do not these showers affect the clover in the same way?

While on the train going to Keokuk to the International Convention, Dr. Mason and Mr. Root claimed that they had been having very wet weather for a month or more, in Ohio and all over the Eastern States. This being the case, if my theory is correct, Ohio and the Eastern States can confidently expect a heavy crop of white clover honey during 1891.

White clover needs a great deal of moisture to develop it properly. The drouth here was excessive during July and August. On the grazing land the stock had consumed every particle of grass and clover, but the rains, during September, started both grass and clover with new life, which was followed by

another severe drouth during October, November and December. The stock were so eager for green stuff, that they ate the clover and grass down to the roots. There is no doubt but that the range here will yield less clover honey than last year or the year before.

What shall I do so as not to lose the use of my hives and bees? Simply this, start more out-apiaries and keep fewer bees in a place; probably 40 colonies will be as much as any one location will support on white clover, in this vicinity, next season. Afterward, I would mass them on the Spanish-needle level, during July and August.

No subject connected with bee-culture, has been so little ventilated, as the conditions necessary to produce a crop of nectar, not only the condition of the weather during bloom, but from seed-time until harvest. I was glad to see this theory adopted by Professor Cook at the International convention. For the benefit of Dr. Miller and others, I wish to show the advantages to be derived from a thorough understanding of this subject.

A farmer has a crop of wheat ripe and ready to cut. If he understands his business he knows how much twine to get to tie it up; how many men to get to stack it; how much help he needs to thresh it, etc., etc.

If we understand the conditions that lead up to a honey crop, we may know how many sections to provide, how much foundation to get, what other supplies we will need, and to what apiaries to take our supplies. I will quote from Langstroth, (Revised by Dadant, page 303, article 582.)

"In many years practice in keeping bees in 5 or 6 different apiaries, I have found out that the crop will vary greatly in a few miles, owing to the different flora of the various localities, and more especially to the greater or less amount of rain-fall at the proper time."

J. M. Hambaugh, of Spring, Ills., harvested altogether different yields, both in quality and quantity, from two apiaries only $2\frac{1}{2}$ miles apart. Does this not prove conclusively that, to secure the best results, the bees must be properly located? Also, that a location only 2 or 3 miles distant from each other, may be able to support twice the number of bees profitably that the home-apiary would. If we must wait to find this out by actual test, by the time we determine to take advantage of the extra yield, the crop will be over.

So that the position Dr. Miller takes is altogether untenable (page 777, BEE JOURNAL). "That it makes but little

difference in the practical results whether this theory be true or not."

If the bee-keepers in different parts of the country would report the condition of white clover in their locality, say on Sept. 1, Nov. 1, and Feb. 1, and then, what their yield is in June, as well as the conditions of the atmosphere and the clover plants, we could soon thoroughly understand this subject.

Upper Alton, Ills.

Past and Future Apicultural Journalism.

THOMAS G. NEWMAN.

This subject has been assigned to me for some suggestions. As my available time is very limited, I shall be brief, leaving it to you for discussion and amplification.

THE PAST.

Apicultural journalism was called into being in America, just 30 years ago to-day, when the lamented Samuel Wagner issued the first number of the AMERICAN BEE JOURNAL. Its birth occurred then, because it was a necessity—it was demanded by the existing state of apicultural progress.

The movable-frame hive had been invented, the mysteries of bee-economy had been manifested, rational bee-management had been inaugurated, the improved races of bees had been imported, and a medium of communication between those engaged in the business of importing and selling bees, of manufacturing and vending hives, and of producing and disposing of honey, was a "want" which could no longer be left "unfilled!"

THE PRESENT.

From one small monthly of 24 pages, American apicultural journalism has now grown to something like a dozen monthlies and one weekly. Meanwhile, over 50 more have existed for a brief time and passed away, and now even their names have been almost forgotten. Samples of about that number are now preserved in my library, to show what "might have been!" Those surviving are exerting a wonderful influence to-day in apicultural progress.

THE FUTURE.

That is quite speculative. Apicultural journalism will in the future be just what bee-keepers themselves make it. If they liberally support the best exponents of the vocation, if they generously patronize those which give tone and influence to

the pursuit—then we have no fears for the future.

The editors of the future will doubtless lead the fraternity on to brighter achievements, and greater inventions, which will surpass the present and eclipse the past! Like brave generals, they will lead, when storming the citadel of the undiscovered future; and, taking the grand inventions from their hiding place, will hold them up to the astonishment and admiration of the World!

POINTS FOR DISCUSSION.

In what direction may we reasonably look for "the next progressive step?" Can any one present give us a "pointer?"

How may we best encourage such inventions? How can we hasten and allure the revolutionizing discoveries of the immediate future?

In what better way can we invite improvements, and assist in making them known, than to encourage and support bee-periodicals, and help to widen their influence and power of doing good?

Apicultural journals have created a sentiment in favor of defending the rights of bee-keepers. Their influence brought the National Bee-Keepers' Union into existence. Is it not our duty to uphold that helpful organization in every possible way—thus faithfully serving our age and generation, and at the same time proving ourselves worthy to form a part of the onward, sweeping tide of destiny? We must help to make the progressive future gloriously excel both the past and the present.

A thorough discussion of these important questions is invited.—*Read at the Michigan State Convention.*

To Connecticut Apiarists.

EDWARD S. ANDRUS.

I began in the Spring with 2 colonies of black bees, and I bought 2 Italian colonies which have increased to 10. I have re-queened all poor stock with good queens. I took about 12 pounds of honey, and believe the bees to be in good condition for the Winter. Why do we not hold bee conventions here in our busy little State? I believe there are bee-keepers enough in the State to make quite a respectable gathering. We are a long way behind our western brothers, and are depending too much upon them for our own good. I, for one, would be glad to be a member of such an organization. What do brother bee-keepers say about organizing?

Tarrington, Conn.

CONVENTION DIRECTORY.

Time and place of meeting.

1891.
Jan. 28.—Vermont State, at Middlebury, Vt.
J. H. Larrabee, Sec., Larrabee's Point, Vt.
Feb. 10, 11.—Ohio State, at Toledo, O.
Miss Dema Bennett, Sec., Bedford, O.
Feb. 11, 12.—Eastern Iowa, at Maquoketa, Iowa.
Frank Coverdale, Sec., Welton, Iowa.
May 7.—Susquehanna County, at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—P. H. Elwood,Starkville, N. Y.
SECRETARY—C. P. Dadant,Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon, . . .Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Bees Doing Well.

I have just returned from a short eastern trip, and found my bees, and those of the neighborhood in general, in good condition. The demand for bees is greatly on the increase, and prospects are once again looking brighter. Allow me to congratulate you on the improved appearance of the BEE JOURNAL.

W. M. BARNUM.

Indianapolis, Ind., Jan. 8, 1891.

The Drouth of Last Summer.

The weather is very fine here. Bees are having good flights. My bees are packed on the summer stands in dry forest leaves, and are wintering good so far. I extracted 60 gallons from 12 colonies, and have most of it on hand yet, it is all candied solid. I am well enough satisfied considering the drouth.

W. H. MARTIN.

Elkhorn, Neb., Jan. 5, 1891.

Bees in Manitoba.

I have seen reports from all parts of the United States and Canada in the AMERICAN BEE JOURNAL, but have seen none from Manitoba where the mercury gets as low as 50° below zero in mid-Winter. In the Spring of 1889 I bought 3 colonies of bees from C. Thellmann, of Minnesota, from which I extracted 250

pounds of honey, and the number of colonies increased to 11. I lost 2 colonies last Winter through dampness and 3 more from Spring dwindling, which left me 6 colonies. The season was very poor here, we had too much rain in the honey season and the Spring was very backward. We had actually no warm weather until June. I put 10 colonies in Winter quarters on Nov. 10, and expect to leave them there until the latter part of April. C. J. WINKLER.

Treherne, Manitoba, Dec. 29, 1890.

Failure of Crop.

The honey crop in this locality was an entire failure, and most of the bees, that were not fed, will starve before they can obtain a living in the Spring. The Winter thus far has been exceedingly fine, with no snow to speak of. After seeing a copy of the Illustrated Home Journal, I wondered how any home could be without it. WM. ENKE.

Rochester, Minn., Jan. 6, 1891.

A \$2,500 Fire.

My shop and all the machinery, together with all my bee-fixings, were destroyed by fire last July. I had no insurance. It even burned my gold watch, coat, etc., but I have 170 colonies of bees left, and must have the AMERICAN BEE JOURNAL. It looked hard to see it all go (\$2,500 worth) but like "Josh" I don't cry for spilt milk, but grab up the pail and go for the next cow. I like the new form of the BEE JOURNAL. It is more like a book and takes up less room.

D. G. WEBSTER.

Blaine, Ills., Jan 12, 1891.

Weighing Bees.

Our bees, 93 colonies, are very quiet in the cellar, the same number as we wintered one year ago. We only secured a half-ton of honey. We weighed our bees the last of September and they weighed from 40 to 60 pounds. We weighed them again in a month, and were surprised to find them turn the scales at the same weight they did a month before. Was it Hibernation? We think darkness, dryness and dormancy are the 3 requisites for cellar wintering, with a temperature from 42 to 44°. The hives should be covered with something porous.

J. A. PEARCE.

Grand Rapids, Mich.

Fears Loss this Winter.

Our Fall and Winter so far has been very dry and mild, until last night, when it rained, and to-day it is snowing. Bees that have plenty of honey I think are doing finely, but I think there will be a heavy loss this Winter. Some have already lost a good deal by starvation. I doubled up a good many of mine. I put 31 colonies in the cellar on Dec. 24, and I think they are doing well.

SAMUEL FLORY.

South English, Iowa, Jan. 1. 1891.

Summer Weather Yet.

It was very dry here last Summer, so I will not have to give a long report of my surplus honey crop, though I have some honey for sale. My bees are on the summer stands yet, with stores enough to take them through the Winter. The weather is very mild so far this Winter. I have 35 colonies.

LIONEL BROKAW.

Summer Hill, Ills., Jan. 1, 1891.

Bees are Wintering Nicely.

All are very quiet in the cellar with the thermometer ranging from 45° to 48°. I raised the hives off the bottom board about $\frac{1}{4}$ inch, which gives plenty of ventilation. I have left a few hives outside to try the experiment of seeing which will winter best. I have about 135 colonies in my cellar. I attended the convention at Rockford, where I met many kind friends and new acquaintances, and where we discussed many bee topics as best we could. Take it as a whole, I can say we had a very pleasant time, and I thought it very profitable.

A. Y. BALDWIN.

DeKalb, Ills.

Wintering on Uncapped Stores.

My 22 colonies, put into Winter quarters in the Fall of 1889, came through without loss. Every one was strong. The first of June found them all full of bees, many of the queens laying, just on the point of swarming, as I supposed. Instead of receiving swarms, I noticed most of the colonies were killing their drones. The weather during fruit-bloom was wet and cool, so that it prevented the bees from working. The result was but few swarms and but little fruit, in this locality. I have the very general report to make, "Honey crop a failure, and we had to resort to feeding." I

watched with hope until I found golden-rod was going to fail. This brought feeding late, so that cold weather found much of the stores uncapped. My case will afford an experiment of wintering, or trying to winter, on uncapped stores of sugar-syrup, and I shall studiously watch the result. My bees appear to be in good condition now. I would like to see an article from some one on "the proper treatment of bees, when found killing their drones the first of June."

J. P. SMITH.

Sunapee, N. H., Dec. 29, 1890.

Well Supplied for Winter.

I have 29 colonies of bees in new Heddon hives all in good condition, as far as food is concerned. I am nearly 78 years of age, with health rather poor and I think it is rather too much for me to give them the necessary attention another season. So far, in my experience, I have done well, in securing honey.

T. J. BATES.

White Hall, Ills., Jan. 3, 1891.

Not Discouraged.

The past season has been the poorest for bees in this section, that I have ever known. No swarming, no honey, and consequently no money, and were it not for the weekly visits of the BEE JOURNAL to wake new thoughts and cause new efforts, I would have but little or no ambition to try to do anything with bees. With nearly 100 colonies in fairly good condition in early Spring, I arranged my plans for a big crop of honey. Alas! for my expectations. The cold rains of Spring and Summer, soon washed them all away. I am much pleased with the new dress of the BEE JOURNAL. Enthusiasm is catching, and so as I read the reports weekly of other bee-keepers, I feel like gathering up my strength for a stronger pull. The BEE JOURNAL has paid me well for all it costs.

V. N. FORBES.

West Haven, Vermont.

Generous Endorsement.

I unqualifiedly endorse the HOME JOURNAL, as one of the best "Home Journals" I have seen. Not only its typographical appearance, but in every respect, morally and otherwise. In fact it fills a place that others have attempted, but have failed in, by reason of introducing politics or some form of sectarianism or other. To the scientist, it may

not be of much value. To the religionist, it may not present the creeds he endorses, but to the lover of home, and to those who desire to place nothing in the home that can in any wise be considered harmful, it appeals in every page. One cannot expect for the price of the subscription a dissertation in every number on every topic of interest, but the magazine gives a chance for every one to put in their homes a clean paper that will amuse, benefit, and instruct.

J. E. POND.

North Attleboro, Mass.

Bees Pay Better than Anything Else.

My bees have done very well considering the care they have had. I never have had anything pay better. I had last Spring 31 colonies. I divided 2 and got 9. My bees did not swarm much and I waited until they were all full of honey before I commenced to extract it. I got 3,500 pounds of honey, which finds a ready market in Colorado. I leave my bees on Summer stands, partially closing the entrance, is all I do with them.

E. W. WARNER.

Moab, Utah, Dec. 29, 1890.

Failure of Honey Crop.

I went through my bee-cellar to-day and found my bees all in good condition. Fifty colonies of mine could do nothing last Summer. I keep them going with granulated sugar, and will hold up my grit for another season. I see in the BEE JOURNAL that the State of Minnesota was a failure, last year, in the bee business. "If you don't at first succeed, try, try, try again."

I see on the list of the Union for 1890, that there are 373 members. And again, I see that there are several lawsuits started and I am glad to hear it. Now let us see what the Union can do. I will send my dollar, dues for the year of 1890, and if you run short I will put in more hereafter.

FRED BOTT.

Wabasha, Minn., Jan. 4, 1891.

Bees Wintering Well.

Bees have done very poorly the past season. I got about 150 pounds of comb-honey from 60 colonies, Spring count. Increased them to 89 colonies which are wintering all right so far, and I think the prospect is good for a nice crop next season.

D. KAUFFMAN.

Neediz, Ore.

Experience is Encouraging.

I do not know whether it is your mistake or mine, but my letter of Dec. 15, should read two hundred dollars worth of honey instead of two hundred pounds. I got plenty of honey from the lower part of the old hives, and would rather have the surplus in sections above, but I do not know how to get it there. My experience has been very encouraging instead of otherwise. I should be very much obliged if the mistake could be corrected.

E. COOKE.

Cataraqui, Ont., Jan. 7, 1891.

Took the County Prize.

The honey crop last season was not very good in this locality. The honey flow from white clover lasted only about 12 days. I had some Fall honey. I had 7 colonies Spring count, increased to 9 and took 415 pounds comb-honey in 1-pound sections. I was awarded the premium on honey at our County Fair. My bees are in good condition at this time, and I presume will come out all right in the Spring. The prospect for white clover is good.

A. F. SANGER.

Pilot Grove Mo., Jan 15, 1891.

A Few Buzzings from Iowa.

In the Spring of 1890 I commenced with 115 colonies of bees and *very* high hopes. Everything looked very encouraging for a good season, but, as Spring passed and Summer merged into Autumn, it became apparent that my hopes were again to be blasted. I wonder how many have laid plans, based on the future honey-crop, only to have them vanish like an air bubble.

At the close of the season I had 124 colonies, with just about honey enough to carry them till Spring, *not a pound of surplus*. I have 34 colonies in the cellar and the balance in chaff-hives, and thus far they are wintering very nicely.

At the present writing we have had no winter, only an occasional *sharp* morning, so that the bees could not die unless they died from spite.

Some of the great lights tell us that bee-keepers, as a rule, are a happy-jolly-contented class of people. I think all that are left must be, for 3 failures out of 4 seasons, has been enough to drive all the "rolling stones" from our ranks.

Now that there is a good prospect that bees will Winter well, I would say to all beginners; do not get wild about it; do not go in debt on the strength of a large honey-crop, but hold yourselves level.

If we (we means *every* bee-keeper) get a good crop of honey this season we ought to get a good price for it. The markets are nearly bare of honey, so let us be careful about slaughtering prices, for this is one of the worst evils connected with our pursuit. In the BEE JOURNAL Jan. 8, James Heddon says: "Our success demands plenty of bees, good crops and low prices," I would ask what do you call "low prices?" Let us beware of encouraging these low prices. Prices go *down* easier than they go up, and are higher when honey is scarce.

In the Fall of 1889, comb-honey retailed at 15 cents per pound, and last Fall at 25 cents per pound.

If we were sure of a good crop *every* year, we could stand the "low prices," but as we are not, let us try and make it average up.

H. L. ROUSE.

New Hampton, Iowa.

More Convenient.

The AMERICAN BEE JOURNAL is to be congratulated on its new dress and improved appearance. It is much more convenient for binding and reference. Every bee-keeper should read it.

FRANK COVERDALE.

Welton, Iowa.

Holding Closed-End Frames Together.

With reference to holding closed-end frames together, mentioned by Rev. W. P. Taylor, on page 57, I would say: For holding the frames together I have nothing better than a strong cord; I make a loop in one end, put it around the brood-nest, pass the end through the loop, draw up taught, and take a half-hitch. This can be unfastened instantly. It is the invention of the late M. Quinby, and is used by all who use the standing frame, on the Quinby plan. Those who are interested in standing frames, should read Quinby's new Bee-Keeping, it explains the whole system.

IRWIN GROVER.

Cooperstown, N. Y.

Winter Losses Estimated.

The ground has been covered with snow since the cold weather began. We have had no extreme cold weather yet, but just cold enough to hold the snow—very favorable for wintering bees so far, also for clover. Bees went into Winter quarters in this vicinity very light in stores and young bees. But few bees

matured in September, and less than is usual with us in October. Light stores and too many old bees, will "wipe out" about 50 per cent. of the colonies in these parts before fruit bloom. The average yield the past season was about $\frac{1}{4}$ crop of honey with about 25 per cent. increase. People are neglecting their bees very much on account of several poor seasons in succession. I have 113 colonies in fair condition in the cellar and am feeding more than ever before.

G. N. ASHBY.

Albion, N. Y., Jan., 1891.

Very Poor Results.

Our bees did very poorly last season both in honey and increase. Seventy-two colonies, Spring count, gave us only 200 pounds of comb-honey, 500 pounds of extracted-honey, 15 swarms, 200 unfinished sections and 200 pounds in frames for feeding next Spring. We put the bees in the cellar on Dec. 24, when they were in fair condition. They are very quiet, at a temperature of 45°.

We like the improvement you have made in the BEE JOURNAL very much.

S. J. CHURCH & SON.

Cedar Rapids, Iowa, Jan. 6, 1891.

Gathering from Cat Willow.

I expect to establish a few more out-apiaries, as I now think they will pay well enough in this State. There are very few bee-keepers around here. Last Spring I moved my bees to Wood Ridge, N. J., as the country about that place is partly meadow, and has plenty of cat willow. The bees are gathering large quantities of pollen from the willow, which blooms in March. It seems that in June the country about Wood Ridge is not suited for bees, so I will have to take them to a better place. It seems odd to me that my bees in the city, at my residence, have gathered more honey than those in the out-apiaries. I believe it is mostly white clover honey.

JOHN BLANKEN.

Jersey City, N. J., Jan. 11, 1891.

Bees in Good Condition.

I have 180 colonies of bees in Winter quarters. I obtained but little surplus honey last year, but my bees never went into Winter quarters in better condition. If there is a good flow next season I shall be ready for it.

H. B. VISSON.

Ottumwa, Iowa, Jan. 8, 1891.

Satisfactory Honey Crop.

I started last Spring with 15 colonies, they increased to 23, and I have extracted 1,200 pounds of honey. I use Langstroth hives and work entirely for extracted honey. Not being accustomed to handle bees, at the beginning of the clover bloom I moved up a frame of brood to keep them from swarming. If there is any other way to prevent swarming without getting brood in the upper story, I would like to know it.

BENJAMIN TOWNSEND.

Lyndhurst, Ont., Jan. 12, 1891.

Italianizing an Apiary.

I have an apiary of 40 colonies of bees, which I wish to Italianize the coming season. As I have but little practical knowledge in that branch of bee-keeping, will friend Doolittle, Heddon, Dr. Miller, Demaree, or some one else tell me through the AMERICAN BEE JOURNAL, the easiest, most simple and least expensive way, and the best time in the season to do this. Do not refer me to books or back numbers of the JOURNAL. I want something fresh and to the point, and so plain that "though a fool I may not err therein." It may also be of benefit to other readers.

A. J. DUNCAN.

Hartford, Iowa, Jan. 12, 1891.

Carniolan Bees are Best.

I have not done very well for 3 years past. It was too dry for the bees to do well here last Summer and I had to feed them until the Fall rains came. After that they did pretty well until we had the first frost in October. What little honey I did get was very nice. The basswood did not keep in bloom more than 5 days last year. My bees are about 3 miles from it, and if I do not have my colonies all strong at the time, they do not get very much benefit from it. I see by the BEE JOURNAL that some bee-keepers find fault with the Carniolan Bees, I have had them for 6 years and can say that I have found them just as Frank Benton recommended them. I have always got my queens from the most responsible breeders in the United States, and have always found them to be far superior to any other breed I have tried for this part of Nebraska. I also got these queens for ten of my neighbors and have not heard anything but that they were all well pleased with them. The reason I prefer this breed is that they winter better in cellars than the

other bees, come out stronger and there is no Spring dwindling. I have seen them build up faster on the apple bloom and they will go out on cold days in the Spring when other bees will do nothing. When they come to swarm they are not as bad as the Palestine Bee but about the same as the Italian and when they cap their honey, it is finished up nicely and white as snow. As to gentleness, they have no superior if they are purely bred. I produce nothing but comb-honey and these bees answer my purpose. There is another thing about quiet bees. If you wish to sell a farmer a colony of bees, the first thing he will say will be about the stinging points of them, and when you tell him they have been improved, just like other kinds of stock, he will not believe you until you take him into your apiary and show him the difference; then you may sell him a colony. If it were not for the cross-breeds of bees, there would be no trouble to sell bees to farmers, if they were Carniolans or Italians. About 8 years ago we used to get our bee hives by the car-load, but of late years we are not using so many. Some of the bee-keepers would not read a bee journal if I would give it to them, and I give lots of them away, to keep them on the right road to prosperity.

JAMES JARDINE.

Ashland, Nebr.

Bee-Culture in Washington.

I am receiving a number of letters from subscribers to the BEE JOURNAL, asking for information about the State of Washington, but many of them have the address so illegibly written that I do not know where to send my answers. Please ask them through the BEE JOURNAL, to write their addresses more plainly. I am not in the real estate business, but if they will write their address plainly and enclose a 2-cent stamp for return postage, I will give them what information I can and send them Seattle papers. JOHN BOESTLER.

Vashon, Wash., Jan. 10, 1891.

Satisfied with the Increase.

I commenced the Spring of 1890 with 28 colonies of bees, increased to 34, and got about 700 pounds of extracted-honey. Bees in this neighborhood have gone into Winter quarters, the colonies rather weak in bees and short in honey. A good many new colonies have died already, and many more will starve before Spring.

FRED BECHLY.

Searsboro, Iowa, Jan 16, 1891.

Ventilation for Bee-Cellars.

My bees were put in the cellar on the evening of Dec. 1. They have been unusually quiet ever since, and there are very few dead ones on the floor. The temperature is almost constantly at 45° Fahr. The Winter is very mild, and although the mercury was 2 or 3 times as low as 25° above zero, it went up also to 55°. There is not much snow on the ground. Last Fall I put in a sub-earth ventilator made of 6-inch tiles, and 25 feet long. It enters the bee-cellar on the east side, just a little below the floor. This and a pipe in the chimney keeps the air sweet and pure.

L. HAMMERSCHMIDT.

Amana, Iowa, Jan. 9, 1891.

Bees of Great Benefit to Fruit.

My honey crop, for the season ended, did not come up to my expectations by any means. I was looking forward to a crop of 1,000 pounds. Everything was flattering until July when the drouth came on, and that ended the matter. I got 100 pounds of very fine raspberry honey, which I sold for 25 cents per pound—the standard price for first-class honey. I had many orders, from customers, for such goods but was unable to fill them. My bees in early Spring seemed slow to increase in strength, and I did not put the sections on until after cherry and apple bloom were over. This, I think, was a mistake, as a friend of mine then had his surplus on, and secured a fine lot of both kinds. I commenced the season with 9 colonies and increased only 2, and during the Fall, I lost 2. Last Fall I introduced 5 Syrian queens, 3 of which met an untimely death and I have been sorry I did not get Italians instead. During the Summer my bees turned so cross that I could scarcely work with them. During the Fall the bees had quite a run on buck-wheat which kept them in good working order. I had to feed them for Winter stores, and I am afraid I will lose a part of them this Winter. I have them packed with forest leaves, and under a roof. I feel like giving up the bee business sometimes, and yet I do not want to be without them, as I am cultivating strawberries and raspberries, besides having an apple and peach orchard, and I think, yes, believe, that they are of immense benefit to me, even if I do not get very much honey. I could do better by extracting; that is I could get more pounds of honey, but I have some trouble in selling it, as nearly all prefer to pay

the difference, and besides that they imagine that the extracted-honey is mostly made of sugar. Bee-keepers in this neighborhood take little interest in bees and they are left to take care of themselves the best they can, and the result often proves disastrous. Those who do keep bees for profit, take one or more journals. Very little encouragement is given to bee-keepers by our Apicultural and Horticultural society of Berks County. The premiums are so small that only two or three persons exhibit, and then only in small quantities. Berks County should have an association for bee-keepers. Many are in favor of the scheme but it seems to all end in talk.

EVAN R. STYER.

Morgantown, Pa., Jan. 13, 1891.

Bee-Culture in Kansas.

In 1887 I commenced with 2 colonies of bees, one was so weak that it starved, and the other was stolen. Determined not to be beaten, the next Spring I bought 23 colonies, all of them being small. I was obliged to transfer them, and in so doing I lost 2 colonies and there being 2 queenless ones, it left me but 19. I have now 24 colonies all in good condition. From 9 colonies I took 80 pounds of comb and 12 pounds of extracted honey per colony; and, from 11 colonies, I took 12 pounds of extracted-honey per colony. We had a very poor season on account of the drouth. Our Winters are very mild and this Winter the bees have been flying every few days, the mercury ranging from 50° down to 15° above zero, the average being about 40°. I winter my bees on their Summer stands in single walled hives, and have had no loss or Spring dwindling. We have a good market for honey, I sold my comb-honey for 15 cents per pound and extracted for 12½ cents per pound.

L. WAYMAN.

Chanute, Kansas, Jan. 7, 1891.

Strange Freak of Nature.

In the Fall of 1888, there was growing on a vacant lot adjoining my residence, a lot of golden rod and some white and pink flowers, the name of which I did not know, but which appeared to be a honey plant. They were in full bloom and literally covered with what looked like bees, but on catching some, I found them to be flies. On the wing and also on the flower, they

looked exactly like a bee, but when caught and examined they proved to be lighter in color, the abdomen was flat and on the under side they looked like a lightning bug. I had a good joke on passers-by, telling them that I had my bees mixed with lightning bugs, so that they could work at night. I caught some and upon dissecting them, I found they had a honey sack which was full of honey. They made a noise like the bee only louder and in a lower key, and it was hard to distinguish them from the bees, which they outnumbered 5 to 1, until they were caught. They were never noticed here before or since.

J. E. PRICHARD.

Port Norris, N. J., Jan. 13, 1891.

[You should have sent some samples of them to Prof. Cook. He is always pleased to receive such.—Ed.]

Bee-Keeping in Northern Nebraska.

As a general thing the bees here have gathered enough honey to Winter on. Doctor Porter, who lost so many colonies last Winter, has been dividing them up. He had 15 colonies left in the Spring and I hear that he divided them until he had over 60. He used the combs and honey left by the colonies which died. Another man had a few late colonies but as they did not gather enough honey to winter on, he thought it would not pay to feed them. Bee-keepers here say that their bees will winter on the stores they have gathered, but they have no surplus honey. One man started last Spring with 2 colonies, he had 3 swarms but 2 of them went together, so that he only doubled his number. Another, who had a large increase in 1889, had a very small one last season, and no surplus honey. It is the same all over this country, small increase and very little surplus honey. I weighed my hives when I put my bees into the cellar and put honey into the 3 lightest ones, together with some sugar syrup, and I intend to try and keep these colonies alive. I have 60 or 70 pounds of surplus honey.

IRA N. LYMAN.

St. Peter, Iowa, Jan. 9, 1891.

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W. J. PATTERSON.

Sullivan, Ills., Dec. 5, 1890.

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HONEY AND BEESWAX MARKET.

DETROIT, Jan. 17.—Comb Honey is quoted at 15@17c. White Clover quite scarce. Extracted, 7@8c. Beeswax, 26@27c.

M. H. HUNT, Bell Branch, Mich.

NEW YORK, Jan. 17.—Market is very quiet, especially on comb honey. We quote: Fancy white 1-lb., 15@16c; 2-lbs., 13@14c; off-grades, 1-lb., 13@14c; 2-lbs., 12c; buckwheat, 1-lb., 11@12c; 2-lbs., 10c. Extracted, basswood and white clover, 8@8½c; buckwheat, 6½@7c; California, 6¾@7¼c; Southern, 65@70c per gallon. Beeswax, 25@27c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Jan. 17.—Honey is very slow sale, both comb and extracted. We quote white 1-lb. comb, 16@18c; dark, 12@13c; white, 2-lb., 14@15c; dark, 11@12c; extracted, 6@7c. Beeswax, 25c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Jan. 18.—Demand is good for all kinds of extracted honey, with a full supply on the market of all but Southern, which is scarce. It brings 6@8c per pound. Demand is fair for choice comb honey, which we hold at 16@20c, in the jobbing way.

Beeswax is in good demand at 24@26c., for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

CHICAGO, Jan. 17.—Demand at present not very active on comb honey. Fancy white, 18c; white, 17c; white 2-lb. sections, 15c; buckwheat, 1-lb. sections, 13c; extracted, 7@9c. Beeswax, 28c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Jan. 18.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.

HAMBLIN & BEARSS, 514 Walnut St.

CHICAGO, Jan. 19.—There is not the volume of trade usual at this season, yet prices are without material change since last quotations. Best lots of white honey in 15-pound sections, brings 17@18c; brown and dark, slow, at uncertain prices. Extracted, 7@8c per pound. Our stock is light, as to quantity, but is kept well up to demand by daily receipts. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

DENVER, COLO., Jan. 16.—First grade 1-lb. sections, 16@18c. Supply exceeds the demand at present. Beeswax, 25@28c.

J. M. CLARK COM. CO., 1517 Blake St.

BOSTON, Jan. 9.—While honey is selling slowly, prices are being well maintained, and the supply will be entirely exhausted before the first day of March. Best 1-lb. comb-honey is selling at 19@20c; fair to good, 18@19c. There are no 2-lb. sections on hand. Extracted, 7½@9c. There is no beeswax on hand.

BLAKE & RIPLEY, 57 Chatham Street.

ALBANY, N.Y., Jan. 17, 1890.—The honey market is quiet and steady, with light stocks of any kind or grade. We are selling white at 15@18c; mixed, 14@15c; dark, 12@14c. Extracted, white, 9@10c; mixed, 6@8c; dark, 6@7c.

H. R. WRIGHT, 326-328 Broadway.

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